

## ABSTRACT

An assembly for capacitively detecting an object on a support structure includes at least one electrode being arranged in the vicinity of the support structure, and at least one cable being connected to the at least one electrode. The at least one cable has a first conductor and a second conductor. The first conductor is connected to a series connection of a DC source and a first AC source. A control device is arranged to control the DC source to provide a predetermined DC voltage to the at least one electrode to provide a clamping force on the object, and control the first AC source to provide a predetermined first AC voltage with a first amplitude and a first phase via the first conductor to the at least one electrode for capacitively detecting the object. The assembly includes a second AC source connected to the second conductor and the control device is arranged to control the second AC source to provide a predetermined second AC voltage to the second conductor. The second AC voltage has a second amplitude and a second phase, respectively, which are substantially equal to the first amplitude and first phase, respectively.